



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,130	05/31/2006	Alain Boudou	09669/086001	1360
22511	7590	12/14/2007		
OSHA LIANG L.L.P. 1221 MCKINNEY STREET SUITE 2800 HOUSTON, TX 77010				
EXAMINER				
GIARDINO JR, MARK A				
ART UNIT		PAPER NUMBER		
4113				
NOTIFICATION DATE		DELIVERY MODE		
12/14/2007		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com

buta@oshaliang.com

# Office Action Summary

## Application No.

10/581,130

## Applicant(s)

BOUDOU ET AL.

## Examiner

Mark A. Giardino

## Art Unit

4113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 5-8, 10 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/ISD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_
- Paper No(s)/Mail Date 5/31/2006

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because Figure 3 cannot be understood without labels of the memory description (27) and set of rules (29). In accordance with 37 C.F.R. 1.84(o), the examiner requires these legends for understanding the drawing. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 5-8 and 10-11 are objected to because of the following informalities:  
grammatical error in Claim 5, 'receiving' should be 'receive' and 'determining' should be 'determine'. Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility.

Claim 1 is a method that only receives a request and makes a determination. This determination is never acted upon, and thus there is no tangible, real world result.

Claim 2 is a method that only makes a determination and verification. The determination is never acted upon, and thus there is no tangible, real world result. Verification is an abstract concept that also fails to perpetrate any tangible result.

Claim 3 is a method that only grants permission. Granting permission is an abstract concept that fails to perpetrate any tangible result.

Claims 9, 12, and 13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 9 recites "a computer program comprising program code instructions" to execute steps of a method, thus the claim is directed to a computer program, *per se*. A computer program is not statutory

subject matter because it is none of a process, machine, manufacture, or composition of matter.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-7, 9-10, and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Larsen et al (US 6,154,819).

Regarding Claim 1, Larsen et al teaches a method to control access to a sector of a flash type memory of an electronic module comprising:

receiving a write request to write data to an area of a partition wherein the partition is located within the sector (Larsen calls sectors as defined by applicant 'blocks', and data to be written is located within a block, see step 1002 in Figure 10 and Column 11 Lines 23-26);

prior to writing the data: determining whether an owner of the data to be written has write access to the partition of the sector and permission to erase the entire sector in which the partition is located (see Column 11 Lines 29-39, where permission is checked prior to writing the data, also note that if memory block is not locked the entire sector is allowed to be erased, see description by Larsen of flash memory's block-erase architecture on Column 1 Lines 44-49).

Regarding Claim 2, Larsen teaches all limitations of Claim 1, wherein determining whether the owner has permission to erase the entire sector comprises using a rule, wherein the rule verifies that the write request does not delete data of an owner other than the owner issuing the write request (Larsen's rule involves checking the lock bit and signifying the owner as an application allowed to erase the entire sector; in other words, if the application sees the block as unlocked it is an owner, see Column 11 Lines 23-42).

Regarding Claim 3, Larsen teaches all limitations of Claim 1, wherein the owner is granted permission to erase the entire sector if at least one of the following conditions is satisfied: the entire sector belongs to the owner (since an owner sees the block as unlocked, the entire sector belongs to the same owner if the block's lock bit is not set, see Column 11 Lines 23-42), remaining partitions in the sector not belonging to the owner are blank, and the remaining partitions in the sector not belonging to the owner are marked as erasable.

Regarding Claim 5, Larsen et al (US 6,154,819) teaches an electronic system comprising:

a FLASH type non-volatile memory comprising a sector, wherein the sector comprises a partition (Larsen calls sectors as defined by applicant 'blocks' and each bit of data within this block may qualify as a partition, see description by Larsen of flash memory's block-erase architecture on Column 1 Lines 44-49);

a set of rules, wherein the set of rules is used to determine whether an owner of data is granted permission to erase the entire sector (Larsen's rule involves checking

the lock bit and signifying the owner as an application allowed to erase the entire sector; in other words, if the application sees the block as unlocked it is an owner, see Column 11 Lines 23-42);

a memory manager, operatively connected to the FLASH type non-volatile memory (a memory manager is inherently present to execute polling and comparison steps 1006 and 1008 in Figure 10) configured to:

receive a write request to write data to an area of the partition (step 1002 in Figure 10 and Column 11 Lines 23-26);

prior to writing the data, determine whether the owner of the data to be written has write access to the partition of the sector and permission to erase the entire sector using the set of rules (see Column 11 Lines 29-39, where permission is checked prior to writing the data).

Regarding Claim 6, Larsen teaches all limitations of Claim 5, wherein the memory module intercepts all write requests to the FLASH type non-volatile memory (see steps 1004 and 1008 in Figure 10, where all write requests must go through the memory manager present to execute polling and comparison steps 1006 and 1008).

Regarding Claim 7, Larsen teaches all limitations of Claim 5, wherein the memory manager is configured to access a description of the partition, wherein the description comprises the status of the partition (the partition is described by the locked bit; either the partition is locked or not locked as indicated in step 1008 of Figure 10).

Claim 9 is a computer program comprising program code instructions to execute the steps of the method according to Claim 1, and so is rejected on the same grounds as Claim 1.

Regarding Claim 10, Larsen teaches all limitations of Claim 5, with the further limitation exactly as described in Claim 3, and thus is rejected on the same grounds as Claim 3.

Claim 12 is the computer program of Claim 9 with the further limitation exactly as described in Claim 3, and thus is rejected on the same grounds as Claim 3.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of See et al (US 6,401,160).

Regarding Claim 4, Larsen teaches all limitations of Claim 1 as discussed above. However, Larsen teaches only two modes and applies these modes to the blocks exclusively (erasable or not blank, depending on the state of the block's lock bit). See teaches object headers describing each partition of each memory block that specifies the state of the corresponding object within each block, including an 'empty' status (see Status Table 320 and description of memory structure on Column 3 Lines 47-57 in See).



It would have been obvious to a person of ordinary skill in the art at the time the invention was made to which the subject matter pertains to have differentiated partitions within each block and assign them a status as described by See because it would allow for a more liberal lock mechanism, as would have been obvious to one of ordinary skill in the art. For example, if the memory device lists a block as 'locked' as described by Larsen but all blocks within the partition are labeled 'empty', the writing application could still use these blocks due to the extra state. This situation may occur if an application overestimates the amount of memory blocks it needs and thus locks blocks that it does not need.

Regarding Claim 11, Larsen teaches all limitations of Claim 7, and since the only further limitation is the same as that of Claim 4, Claim 11 is rejected on the same grounds as Claim 4.

Regarding Claim 13, Larsen teaches all limitations of Claim 9, and since the only further limitation is the same as that of Claim 4, Claim 13 is rejected on the same grounds as Claim 4.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Toombs (US 7,177,975).

Regarding Claim 8, Larsen teaches all limitations of Claim 5, but does not teach these limitations on a card. However, Toombs teaches a card that contains a write protection system (Column 1 Lines 48-50 and Column 1 Lines 62-64 in Toombs). It would have been obvious to a person of ordinary skill in the art at the time the invention

was made to which the subject matter pertains to have implemented the write protection device described by Larsen on the card described by Toombs, since putting the device on a card makes the system of claim 5 more mobile, which is more convenient for a user, as would have been obvious to one of ordinary skill in the art.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baltar (US 6,446,179) teaches locking blocks of a non-volatile memory. Maeda et al (US 2003/0196028) teaches dividing a memory card into two areas with different levels of permissions. Maletsky et al (US 5,974,500) teaches a non-volatile memory array with access control bits to control writes. Pockrandt et al (US 5,678,027) teaches a bit that allows access to regions of a nonvolatile memory.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Giardino whose telephone number is (571) 270-3565. The examiner can normally be reached on M-R 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Robertson can be reached on (571) 272-4186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11/1/2007

/M.G./

M. A. Giardino

/David L. Robertson/  
Supervisory Patent Examiner, Art  
Unit 4113